UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,273	10/17/2003	Kimmo Mylly	915-005.074	3787

4955 7590 11/01/2007

WARE FRESSOLA VAN DER SLUYS & ADOLPHSON, LLP
BRADFORD GREEN, BUILDING 5
755 MAIN STREET, P O BOX 224
MONROE, CT 06468

EXAMINER	
LEE, CHUN KUAN	
ART UNIT	**PAPER NUMBER**
2181	

MAIL DATE	DELIVERY MODE
11/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/688,273	MYLLY ET AL.	
	Examiner	Art Unit	
	Chun-Kuan (Mike) Lee	2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-7,11-13 and 15-42* is/are pending in the application.

4a) Of the above claim(s) *20-31,33 and 35* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-7,11-13,15-19,32,34 and 36-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

RESPONSE TO ARGUMENTS

1. Applicant's arguments filed 09/13/2007 have been fully considered but they are not persuasive. Currently claims 2-4, 8-10 and 14 are canceled, claims 20-31, 33 and 35 are withdrawn and claims 1, 5-7, 11-13, 15-19, 32, 34, 36 and 37-42 are pending for examination.

2. In response to applicant's arguments, on page 15, 2nd paragraph, regarding the amended independent claim 1 rejected under 35 U.S.C. 103(a) that Oh-Yang does not teach/suggest details of how the mode change commands are transmitted to the card and whether the card indicates to the computer system the mode of the card has been changed; applicant's arguments have fully been considered, but are not found to be persuasive.

Please note that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). As the claim limitation associated with the card indicates to the computer system the mode of the card has been changed is disclosed by Khouli.

Oh-Yang does teach transmitting a command to the card (Fig. 1, ref. 10) via the command line of the interface (Fig. 1, ref. 80) for changing the mode of the card from

the dormant mode to the normal mode (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3), wherein the line utilized for the transferring the corresponding command is the command line.

3. In response to applicant's arguments, on page 16, 1st paragraph, regarding the amended independent claim 1 rejected under 35 U.S.C. 103(a) that Khouli does not teach/suggest the claimed limitation associated with the LAN controller (which is similar to a card) switched from the standby mode to the wake up mode by a command from the computer, because at the time the controller detects the activity, the computer is not awake and the control signal is for waking up the computer not a command from the computer; applicant's arguments have fully been considered, but are not found to be persuasive.

Please note that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). As the claim limitations associated with the card switching from the stand by mode to the wake up mode by a command from the computer is disclosed by Oh-Yang (i.e. examiner is relying on Oh-Yang for the teaching of a command from the computer).

Additionally, at the time when the controller detecting the activity, the computer is partially awake, as the I/O device (Khouli, Fig. 2, ref. 216) is part of the computer's

motherboard (Khouli, Fig. 2, ref. 234), is awake to detect the wake signals from the devices.

4. In response to applicant's arguments, on page 16, 1st paragraph, regarding the amended independent claim 1 rejected under 35 U.S.C. 103(a) that Khouli's SCI signal is not an indication of mode change of the LAN controller, because Khouli only teaches that the computer has a power saving mode that supplies the standby voltage to the "specific wake devices"; any activity in these wake devices will cause the I/O device to output a wake control signal to return the normal power supply; applicant's arguments have fully been considered, but are not found to be persuasive.

The examiner does not fully understand what the applicant is trying to argue, additionally Khouli's SCI signal is an indication of mode change of a peripheral device, such as the LAN controller; as the I/O device (Khouli, Fig. 2, ref. 216) detect the peripheral activity and outputs the wake control signal, therefore indicating the mode change of the peripheral from inactivity to activity or the wake control signals is directly transferred to the motherboard (Khouli, Fig. 2, ref. 234) via the data line (Khouli, Fig. 2, ref. 240) from other peripheral devices (Khouli, Fig. 2 and col. 6, ll. 1-25).

5. In response to applicant's arguments, on page 16, 1st paragraph, regarding the amended independent claim 1 rejected under 35 U.S.C. 103(a) that Khouli does not teach/suggest the claimed limitation "wherein the indication of mode change in the card is transmitted in such a manner that a state of the data line is set in a first logical state

after the command has been received in the card and the state of the data line is set in a second logical state after the normal mode is in use in the card"; applicant's arguments have fully been considered, but are not found to be persuasive.

Please note that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Oh-Yang teaches wherein the card is in a first state after the command has been received in the card (e.g. just received the command, before processing the command) and the card is in a second state after the normal mode is in use in the card (e.g. after processing the command and operating in normal state) (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3).

Khouli teaches the indication of mode change is transmitted in such a manner that a state of the data line (Fig. 2, ref. 240) is set in a first logical state before transferring of the indication (e.g. after the command has been received, before processing of the command) and the state of the data line is set in a second logical state after the normal mode (e.g. active mode) is in use (e.g. after processing of the command and transferring the corresponding indication) (col. 6, ll. 1-25), as the transferring of the indication would require the change of logical stated in the data line in order to detect the indication (e.g. wake signals).

6. As the applicant appears to be applying the above arguments for the amended independent claim 1, towards the amended independent claims 7, 13, 16, 17, 19, 32, 34 and 36-37, the examiner will also apply the above responses toward each respective independent claims 7, 13, 16, 17, 19, 32, 34 and 36-37.

I. INFORMATION CONCERNING OATH/DECLARATION

Oath/Declaration

7. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in **37 C.F.R. 1.63.**

II. INFORMATION CONCERNING DRAWINGS

Drawings

8. The applicant's drawings submitted are acceptable for examination purposes.

III. REJECTIONS BASED ON 35 U.S.C. 112

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 32, 34 and 36-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 32, 34 and 36-37 recites the limitation "the data line" in lines 9-10. There is insufficient antecedent basis for this limitation in the claim.

As per claim 32, 34 and 36-37, it appears unclear to the examiner as to which data line the applicant is referring to. The examiner will assume the following claim limitation of "a data line" for claims 32, 34 and 36, in line 9 for the current examination.

IV. REJECTIONS BASED ON PRIOR ART

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1, 7, 11, 13, 15-19, 32, 34 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh-Yang et al. (US Patent 6,351,820) in view of Khouli et al. (US Patent 6,308,278).

11. As per claim 1, Oh-Yang teaches a method for changing a mode of a card (Fig. 1, ref. 10), the card being connected to an interface of a terminal (Fig. 1, ref. 80), the interface comprising one or more signal lines including a command line, and the card comprising at least one dormant mode (e.g. sleep state) and a normal mode (e.g. normal state) (col. 3, ll. 54-59 and col. 5, l. 66 to col. 6, l. 3), wherein the transferring of

the command would require the correspond command line for transmission, said method comprising:

transmitting a command to the card via the command line of the interface for changing the mode of the card from the dormant mode to the normal mode (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3) wherein the line utilized for the transferring the corresponding command is the command line, and

the card receiving said command and implement the mode change(col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3),

wherein said command is used for changing the mode of the card from the dormant mode to the normal mode or from the normal mode to the dormant mode, said command comprises at least one bit, said bit indicates whether the mode change is from the dormant mode to the normal mode or from the normal mode to the dormant mode (col. 5, ll.15-19; col. 5, ll. 39-43 and col. 5, l. 66 to col. 6, l. 3), as the shift to sleep state command comprising the corresponding bits of command data must differ from the shift to normal command comprising the correspond bits of command data in order to properly indicate the command for setting the sleep state flag; and

wherein the mode change in the card includes the card is in a first state after the command has been received in the card (e.g. just received the command, before processing the command) and the card is in a second state after the normal mode is in use in the card (e.g. after processing the command and operating in normal state) (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3).

Oh-Yang does not teach the method comprising:

a data line;

transmitting to the terminal an indication of indicating the mode change via the data line of the interface; and

the indication of mode change is transmitted in such a manner that a state of the data line is set in a first logical state after the command has been received and the state of the data line is set in a second logical state after the normal mode is in use.

Khouli teaches a system and a method comprising:

a data line (Fig. 2, ref. 240);

transmitting to the terminal (Fig. 2, ref. 212) an indication (e.g. wake signals from LAN controller) of indicating the mode change (e.g. between active mode and standby mode) via the data line (Fig. 2, ref. 240) of the interface (col. 6, ll. 1-25); and

the indication of mode change is transmitted in such a manner that a state of the data line (Fig. 2, ref. 240) is set in a first logical state before transferring of the indication (e.g. after the command has been received, before processing of the command) and the state of the data line is set in a second logical state after the normal mode (e.g. active mode) is in use (e.g. after processing of the command and transferring the corresponding indication) (col. 6, ll. 1-25), as the transferring of the indication would require the change of logical stated in the data line in order to detect the indication.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's data line and indication signal into Oh-Yang's method for the benefit of enabling a robust power management system, wherein the

whole computer system can reduce power consumption (Khouli, col. 2, ll. 1-11 and col. 2, ll. 28-35) to obtain the invention as specified in claim 1.

12. As per claim 7, Oh-Yang teaches a system, comprising a terminal and a card (Fig. 1, ref. 10) which can be connected to an interface of the terminal (Fig. 1, ref. 80), the interface comprising one or more signal lines including a command line and the card comprising at least one dormant mode (e.g. sleep state) and a normal mode (e.g. normal state) (col. 3, ll. 54-59 and col. 5, l. 66 to col. 6, l. 3), wherein the transferring of the command would require the correspond command line for transmission, wherein said terminal comprises:

means for transferring a command via the command line of the interface to the card, for changing the mode of the card from said dormant mode to the normal mode (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3) wherein the line utilized for the transferring the corresponding command is the command line, and wherein the card comprises:

means for interpreting the command and setting the mode of the card according to the command (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3), and

wherein said command is used for changing the mode of the card from the dormant mode to the normal mode or from the normal mode to the dormant mode, said command comprises at least one bit, said bit indicates whether the mode change is from the dormant mode to the normal mode or from the normal mode to the dormant mode (col. 5, ll.15-19; col. 5, ll. 39-43 and col. 5, l. 66 to col. 6, l. 3), as the shift to sleep

state command comprising the corresponding bits of command data must differ from the shift to normal command comprising the correspond bits of command data in order to properly indicate the command for setting the sleep state flag; and

wherein the mode change in the card includes the card is in a first state after the command has been received in the card (e.g. just received the command, before processing the command) and the card is in a second state after the normal mode is in use in the card (e.g. after processing the command and operating in normal state) (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3).

Oh-Yang does not teach the system comprising:

a data line;

means for transmitting to the terminal an indication of mode change via the data line of the interface; and

the indication of mode change is transmitted in such a manner that a state of the data line is set in a first logical state after the command has been received and the state of the data line is set in a second logical state after the normal mode is in use.

Khouli teaches a system and a method comprising:

a data line (Fig. 2, ref. 240);

means for transmitting to the terminal (Fig. 2, ref. 212) an indication (e.g. wake signals from LAN controller) of the mode change (e.g. between active mode and stand by mode) via the data line (Fig. 2, ref. 240) of the interface (col. 6, ll. 1-25); and

the indication of mode change is transmitted in such a manner that a state of the data line (Fig. 2, ref. 240) is set in a first logical state before transferring of the indication

(e.g. after the command has been received, before processing of the command) and the state of the data line is set in a second logical state after the normal mode (e.g. active mode) is in use (e.g. after processing of the command and transferring the corresponding indication) (col. 6, ll. 1-25), as the transferring of the indication would require the change of logical stated in the data line in order to detect the indication.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's data line and indication signal into Oh-Yang's system for the benefit of enabling a robust power management system, wherein the whole computer system can reduce power consumption (Khouli, col. 2, ll. 1-11 and col. 2, ll. 28-35) to obtain the invention as specified in claim 7.

13. As per claim 11, Oh-Yang and Khouli teach all the limitation of claim 7 as discussed above, where both further teach the system comprising wherein the interface comprises at least one card connection for connecting the card to the terminal (Oh-Yang, connection between ref. 18 and ref. 80 on Fig. 1), and

said at least one card connection comprises at least the following lines:

one data line (Khouli, Fig. 3, ref. 310, 320) for the transfer of data between the terminal and the card,

one command line for the transmission of commands from the terminal to the card and for the transmission of responses from the card to the terminal (Oh-Yang, col. 5, l. 66 to col. 6, l. 3 and Khouli, Fig. 3, ref. 236), as the command is transferred from

the computer to the PC card, there must be the command line utilized for the transferring of the commands, and

one clock line (Khouli, Fig. 3, ref. 315, 325) for the transmission of a clock signal from the terminal to the card.

14. As per claims 13 and 16, Oh-Yang a (memory) card (Fig. 1, ref. 10) having at least one dormant mode (e.g. sleep state) and a normal mode (e.g. normal state), arranged to be connected to an interface of a terminal (Fig. 1, ref. 80), the interface comprising one or more signal lines including a command line (col. 3, ll. 54-59 and col. 5, l. 66 to col. 6, l. 3), wherein the transferring of the command would require the correspond command line for transmission, said card comprising:

means for processing a command, said command coming via the command line of the interface of the terminal, for changing the mode of the card from said dormant mode to the normal mode (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3) wherein the line utilized for the transferring the corresponding command is the command line, and

wherein said command is used for changing the mode of the card from the dormant mode to the normal mode or from the normal mode to the dormant mode, said command comprises at least one bit, said bit indicates whether the mode change is from the dormant mode to the normal mode or from the normal mode to the dormant mode (col. 5, ll.15-19; col. 5, ll. 39-43 and col. 5, l. 66 to col. 6, l. 3), as the shift to sleep state command comprising the corresponding bits of command data must differ from the

shift to normal command comprising the correspond bits of command data in order to properly indicate the command for setting the sleep state flag, and

wherein the mode change in the card includes the card is in a first state after the command has been received in the card (e.g. just received the command, before processing the command) and the card is in a second state after the normal mode is in use in the card (e.g. after processing the command and operating in normal state) (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3).

Oh-Yang does not teach the card comprising:

a data line

means for transmitting an indication of mode change in the card to the terminal via the data line of the interface

the indication of mode change is transmitted in such a manner that a state of the data line is set in a first logical state after the command has been received and the state of the data line is set in a second logical state after the normal mode is in use.

Khouli teaches a system and a method comprising:

a data line (Fig. 2, ref. 240);

means for transmitting an indication (e.g. wake signals from LAN controller) of mode change (e.g. between active mode and stand by mode) in the peripheral device (card) to the terminal (Fig. 2, ref. 212) via the data line (Fig. 2, ref. 240) of the interface (col. 6, ll. 1-25); and

the indication of mode change is transmitted in such a manner that a state of the data line (Fig. 2, ref. 240) is set in a first logical state before transferring of the indication

(e.g. after the command has been received, before processing of the command) and the state of the data line is set in a second logical state after the normal mode (e.g. active mode) is in use (e.g. after processing of the command and transferring the corresponding indication) (col. 6, ll. 1-25), as the transferring of the indication would require the change of logical stated in the data line in order to detect the indication.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's data line and indication signal into Oh-Yang's card for the benefit of enabling a robust power management system, wherein the whole computer system can reduce power consumption (Khouli, col. 2, ll. 1-11 and col. 2, ll. 28-35) to obtain the invention as specified in claims 13 and 16.

15. As per claim 15, Oh-Yang and Khouli teach all the limitations of claim 13 as discussed above, where both further teach the card comprising wherein the card comprises a bus connection block (Oh-Yang, Fig. 1, ref. 18) for transferring said change of logical stated to the terminal on the data line (Khouli, Fig. 2, ref. 240) of the interface (Khouli, col. 4, ll. 7-9 and col. 6, ll. 12-14).

16. As per claim 17, Oh-Yang teaches a terminal (mobile station) provided with an interface (Fig. 1, ref. 80) for connecting a card (Fig. 1, ref. 10) to the terminal (mobile station), said card comprising at least one dormant mode and a normal mode (col. 1, ll. 48-52 and col. 3, ll. 54-59), wherein the terminal (mobile station) comprises:

the interface, comprising one or more signal lines including a command line (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3) wherein the line utilized for the transferring the corresponding command is the command line;

means for transferring a command via the command line of the interface to the card, for changing the mode of the card from said at least one dormant mode to the normal mode (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3), and

wherein said command is used for changing the mode of the card from the dormant mode to the normal mode or from the normal mode to the dormant mode, said command comprises at least one bit, said bit indicates whether the mode change is from the dormant mode to the normal mode or from the normal mode to the dormant mode (col. 5, ll.15-19; col. 5, ll. 39-43 and col. 5, l. 66 to col. 6, l. 3), as the shift to sleep state command comprising the corresponding bits of command data must differ from the shift to normal command comprising the correspond bits of command data in order to properly indicate the command for setting the sleep state flag, and

wherein the mode change in the card includes the card is in a first state after the command has been received in the card (e.g. just received the command, before processing the command) and the card is in a second state after the normal mode is in use in the card (e.g. after processing the command and operating in normal state) (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3).

Oh-Yang does not teach the system comprising:

a data line;

means for receiving a indication of mode change from the card via the data line of the interface;

a processor for processing the change of logical state coming from the card and relating to the mode change; and

the indication of mode change is transmitted in such a manner that a state of the data line is set in a first logical state after the command has been received and the state of the data line is set in a second logical state after the normal mode is in use.

Khouli teaches a system and a method comprising:

a data line (Fig. 2, ref. 240);

means for receiving an indication (e.g. wake signals from LAN controller) of mode change (e.g. between active mode and stand by mode) from the peripheral device (card) via the data line (Fig. 2, ref. 240) of the interface (col. 6, ll. 1-25);

a processor (Fig. 2, ref. 214) for processing the change of logical state coming from the peripheral device (e.g. card) and relating to the mode change (col. 3, ll. 15-19 and col. 6, ll. 1-25); and

the indication of mode change is transmitted in such a manner that a state of the data line (Fig. 2, ref. 240) is set in a first logical state before transferring of the indication (e.g. after the command has been received, before processing of the command) and the state of the data line is set in a second logical state after the normal mode (e.g. active mode) is in use (e.g. after processing of the command and transferring the corresponding indication) (col. 6, ll. 1-25), as the transferring of the indication would require the change of logical stated in the data line in order to detect the indication.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's data line, processor and indication signal into Oh-Yang's system for the benefit of enabling a robust power management system, wherein the whole computer system can reduce power consumption (Khouli, col. 2, ll. 1-11 and col. 2, ll. 28-35) to obtain the invention as specified in claim 17.

17. As per claim 18, Oh-Yang and Khouli teach all the limitations of claim 17 as discussed above, where both further teach the terminal comprising wherein the terminal comprises a bus connection block (Oh-Yang, Fig. 1, ref. 18, 80) for transferring said change of logical stated from said data line (Khouli, Fig. 2, ref. 240) to said processor (Khouli, Fig. 2, ref. 214) (Khouli, col. 4, ll. 7-9 and col. 6, ll. 12-14).

18. As per claims 32 and 34, Oh-Yang teaches a mode shifting method for a mobile terminal (e.g. notebook personal computer) having a card interface (Fig. 1, ref. 80) for interfacing a card (Fig. 1, ref. 10) thereto for use after a command has been sent from the terminal to the card to return from a dormant mode (e.g. sleep state) to a normal mode (e.g. normal state) (col. 1, ll. 48-52; col. 3, ll. 54-59 and col. 5, l. 66 to col. 6, l. 3), comprising:

the terminal with an interface (Fig. 1, ref. 80) for transmitting said command to the card to shift to the normal mode (col. 2, ll. 22-30; col. 3, ll. 54-59 and col. 5, l. 66 to col. 6, l. 3), and

the terminal with a processor (e.g. notebook's CPU) for starting to use the card via said interface in a normal way in response to said card shifting to the normal mode (col. 2, ll. 22-30; col. 3, ll. 54-59 and col. 5, l. 66 to col. 6, l. 3),

wherein the mode change in the card includes the card is in a first state after the command has been received in the card (e.g. just received the command, before processing the command) and the card is in a second state after the normal mode is in use in the card (e.g. after processing the command and operating in normal state) (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3).

Oh-Yang does not teach the system comprising:

a data line; and

receiving an indication of mode change from the card informing the terminal directly in response to the card has shifted to the normal mode;

the indication of mode change is transmitted in such a manner that a state of a data line is set in a first logical state after the command has been received and the state of the data line is set in a second logical state after the normal mode is in use.

Khouli teaches a system and a method comprising:

a data line (Fig. 2, ref. 240);

receiving an indication (e.g. wake signals from LAN controller) of mode change (e.g. between active mode and stand by mode) from the peripheral device (e.g. card) informing the terminal (Fig. 2, ref. 234) directly in response to the peripheral device (e.g. card) has shifted to the normal mode (e.g. active mode) (col. 6, ll. 1-25); and

the indication of mode change is transmitted in such a manner that a state of a data line (Fig. 2, ref. 240) is set in a first logical state before transferring of the indication (e.g. after the command has been received, before processing of the command) and the state of the data line is set in a second logical state after the normal mode (e.g. active mode) is in use (e.g. after processing of the command and transferring the corresponding indication) (col. 6, ll. 1-25), as the transferring of the indication would require the change of logical stated in the data line in order to detect the indication.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's data line and indication signal into Oh-Yang's system for the benefit of enabling a robust power management system, wherein the whole computer system can reduce power consumption (Khouli, col. 2, ll. 1-11 and col. 2, ll. 28-35) to obtain the invention as specified in claims 32 and 34.

19. As per claim 36, Oh-Yang teaches a method for use by a card interfacing to a mobile terminal via a card interface (Fig. 1, ref. 80) in said terminal (col. 1, ll. 48-52), comprising:

receiving a command from said terminal to shift from a dormant mode (e.g. sleep state) to a normal mode (e.g. normal state) (col. 2, ll. 22-30; col. 3, ll. 54-59 and col. 5, l. 66 to col. 6, l. 3), and

after shifting from said dormant mode to said normal mode, the card operating in said normal mode (col. 2, ll. 22-30; col. 3, ll. 54-59 and col. 5, l. 66 to col. 6, l. 3),

wherein the mode change in the card includes the card is in a first state after the command has been received in the card (e.g. just received the command, before processing the command) and the card is in a second state after the normal mode is in use in the card (e.g. after processing the command and operating in normal state) (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3).

Oh-Yang does not teach the method comprising:

a data line;

sending an indication of mode change to the terminal indicative of said card shifting from said dormant mode to said normal mode;

the indication of mode change is transmitted in such a manner that a state of a data line is set in a first logical state after the command has been received and the state of the data line is set in a second logical state after the normal mode is in use.

Khouli teaches a system and a method comprising:

a data line (Fig. 2, ref. 240);

sending an indication (e.g. wake signals from LAN controller) of mode change to the terminal (Fig. 2, ref. 234) indicative of the peripheral device (card) shifting from said dormant mode (e.g. inactive mode) to said normal mode (e.g. active mode) (col. 6, ll. 1-25); and

the indication of mode change is transmitted in such a manner that a state of a data line (Fig. 2, ref. 240) is set in a first logical state before transferring of the indication (e.g. after the command has been received, before processing of the command) and the state of the data line is set in a second logical state after the normal mode (e.g. active

mode) is in use (e.g. after processing of the command and transferring the corresponding indication) (col. 6, ll. 1-25), as the transferring of the indication would require the change of logical stated in the data line in order to detect the indication.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's data line and indication signal into Oh-Yang's system for the benefit of enabling a robust power management system, wherein the whole computer system can reduce power consumption (Khouli, col. 2, ll. 1-11 and col. 2, ll. 28-35) to obtain the invention as specified in claim 36.

20. As per claim 37, Oh-Yang teaches a card (Fig. 1, ref. 10) for interfacing to a mobile terminal (e.g. notebook personal computer; col. 1, ll. 48-52) via a card interface in said terminal (connection between ref. 18 and ref. 80 on Fig. 1), comprising:

a control device (Fig. 1, ref. 12), responsive to a command received over a connection from said terminal to shift from a dormant mode (e.g. sleep state) to a normal mode (e.g. normal state) (col. 4, ll. 27-34 and col. 5, l. 66 to col. 6, l. 3),

for storing said command in a buffer (Fig. 3, ref. 16) for interpreting said command as a command to shift to said normal mode from said dormant mode (col. 3, ll. 25-30),

for setting said card to said normal mode (col. 4, ll. 27-34),

wherein the mode change in the card includes the card is in a first state after the command has been received in the card (e.g. just received the command, before processing the command) and the card is in a second state after the normal mode is in

use in the card (e.g. after processing the command and operating in normal state) (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3).

Oh-Yang does not expressly teach the card comprising

wherein the control device sending a change of logical state of a signal line of the interface via said connection to said terminal indicative of said shift; and

the indication of mode change is transmitted in such a manner that a state of a data line is set in a first logical state after the command has been received and the state of the data line is set in a second logical state after the normal mode is in use.

Khouli teaches a system and a method comprising:

a plurality of peripheral devices including a local are network (LAN) controller (Fig. 2, ref. 237);

when the LAN controller is shifted from a non-active mode (e.g. standby mode) to an active mode (e.g. wake up mode), a wake control signal, such as a system control interrupt (SCI) signal, is generated and transferred to the power management device (Fig. 2, ref. 214), and in response to the received SCI signal by the power management device, the computer wakes up (Fig. 5 and col. 6, ll. 1-25), wherein the transferring of the SCI signal would obviously require the change of logical stated in the signal line, because if there is no changes in the logical state the power management device would not detect any signal to process; and

the indication of mode change is transmitted in such a manner that a state of a data line (Fig. 2, ref. 240) is set in a first logical state before transferring of the indication (e.g. after the command has been received, before processing of the command) and the

state of the data line is set in a second logical state after the normal mode (e.g. wake up mode) is in use (e.g. after processing of the command and transferring the corresponding indication) (col. 6, ll. 1-25), as the transferring of the indication would require the change of logical stated in the data line in order to detect the indication.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's data line and indication signal into Oh-Yang's system for the benefit of enabling a robust power management system, wherein the whole computer system can reduce power consumption (Khouli, col. 2, ll. 1-11 and col. 2, ll. 28-35) to obtain the invention as specified in claim 36. The resulting combination of the references teaches the system further comprising the control device sending the SCI signal (e.g. wake signal), associated to the change in the state of operation, to the mobile terminal when the card shifts from the sleep state to the normal state, wherein the SCI signal would require the change of logical state in the signal line.

21. Claims 5-6, 12 and 38-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh-Yang et al. (US Patent 6,351,820) in view of Khouli et al. (US Patent 6,308,278) as applied to claims 1, 7, 13 and 16-17 above, and further in view of Lindskog et al. (US Pub.: 2002/0132603).

22. As per claims 5-6 and 12, Oh-Yang and Khouli teach all the limitations of claims 1 and 7 as discussed above, but Oh-Yang and Khouli does not teach the method and the system comprising:

wherein after receiving said command to set the normal mode, an acknowledgement about the reception of the command is transmitted from the card to the terminal; and

wherein said terminal used is a wireless terminal provided with mobile station functions.

Lindskog teaches a system and a method comprising:

a wireless network interface card (NIC) coupled to a PC forming a mobile terminal (Fig. 2 and [0003]-[0004]); and

the NIC receiving a request from the PC to transit from a dormant state (i.e. D3) to an active state (i.e. D0) ([0079]); and

an acknowledgement is transferred to the PC in response to the request by the PC to transit from a dormant state (i.e. D3) to an active state (i.e. D0) (claim 17 on page 6).

Lindskog is analogous art because Lindskog is in the field of applicant's endeavor, which is associated the mode change of a peripheral device connected to a computer.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Lindskog's mobile terminal and acknowledgement into Oh-Yang and Khouli's interconnecting system and method for the benefit of providing a power saving concept for the PC in a wireless local area network (WLAN) thus improving the battery lifetime of the PC (Lindskog, [0084]) to obtain the invention as

specified in claims 5-6 and 12. The resulting combination of the references teaches the system and the method further comprising:

the card's the acknowledgement associated with the terminal's request to shift to normal state is transferred is transferred to the terminal; and

wherein the card coupled the terminal to form the wireless mobile terminal.

23. As per claims 38-42, Oh-Yang and Khouli teach all the limitations of claims 1, 7, 13 and 16-17 as discussed above, where Oh-Yang further teaches the method and the system comprising wherein the command comprises the one bit that indicates whether the mode change is from the dormant mode to the normal mode or from the normal mode to the dormant mode (Oh-Yang, col. 5, ll.15-19; col. 5, ll. 39-43 and col. 5, l. 66 to col. 6, l. 3), as the shift to sleep state command comprising the corresponding bits of command data must differ from the shift to normal command comprising the correspond bits of command data in order to properly indicate the command for setting the sleep state flag.

Oh-Yang and Khouli does not teach the method and the system comprising the command comprises additional one or more bits further define one or more conditions for mode change.

Lindskog teaches a system and a method comprising command comprises additional one or more bits further define one or more conditions for mode change (Fig. 2 and [0028]; [0057]; [0077]), wherein the additional bits defines the correspond power mode (e.g. D0, D1, D2, D3).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Lindskog's different power modes into Oh-Yang and Khouli's system and method for the benefit of providing a power saving concept for the PC in a wireless local area network (WLAN) thus improving the battery lifetime of the PC (Lindskog, [0084]) to obtain the invention as specified in claims 38-42.

V. CLOSING COMMENTS

Conclusion

a. STATUS OF CLAIMS IN THE APPLICATION

The following is a summary of the treatment and status of all claims in the application as recommended by **M.P.E.P. 707.07(i)**:

a(1) CLAIMS REJECTED IN THE APPLICATION

Per the instant office action, claims 1, 5-7, 11-13, 15-19, 32, 34, 36 and 37-42 have received a final action on the merits. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

b. DIRECTION OF FUTURE CORRESPONDENCES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571) 272-0671. The examiner can normally be reached on 8AM to 5PM.

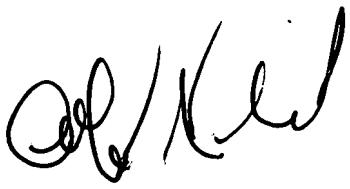
IMPORTANT NOTE

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alford Kindred can be reached on (571) 272-4037. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

October 19, 2007

Chun-Kuan (Mike) Lee
Examiner
Art Unit 2181



ALFORD KINDRED
SUPERVISORY PATENT EXAMINER